

FIG. 1

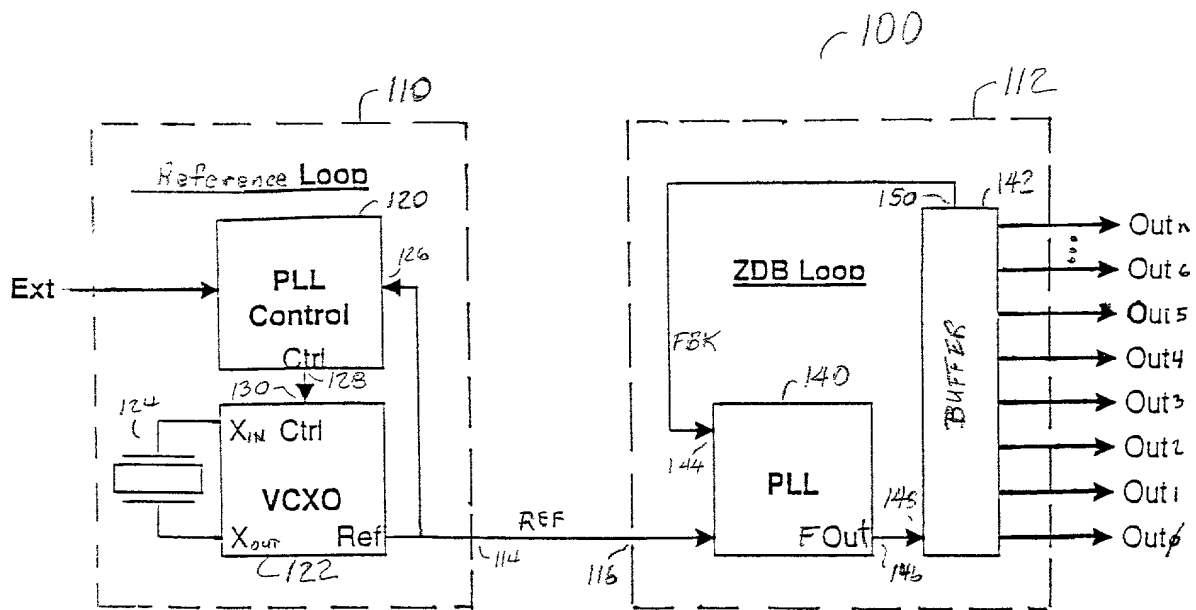


FIG. 2

FIG. 3 is a block diagram of a PLL system. The system includes a Reference Loop (110) and a ZDB Loop (112). The Reference Loop (110) includes a divider (120) and a VCXO (122). The ZDB Loop (112) includes a divider (170), a PFD (172), a Charge Pump & Loop Filter (174), and a VCO (176). The Reference Loop (110) also includes a Charge Pump & Loop Filter (Analog) (123) and an Up/Down Counter (Digital) (124). The ZDB Loop (112) also includes a Buffer (142). The Reference Loop (110) is connected to the ZDB Loop (112) via a feedback path (114). The Reference Loop (110) is also connected to an external input (Ext) (102). The ZDB Loop (112) is connected to an external output (Out 0 to Out n) (104).

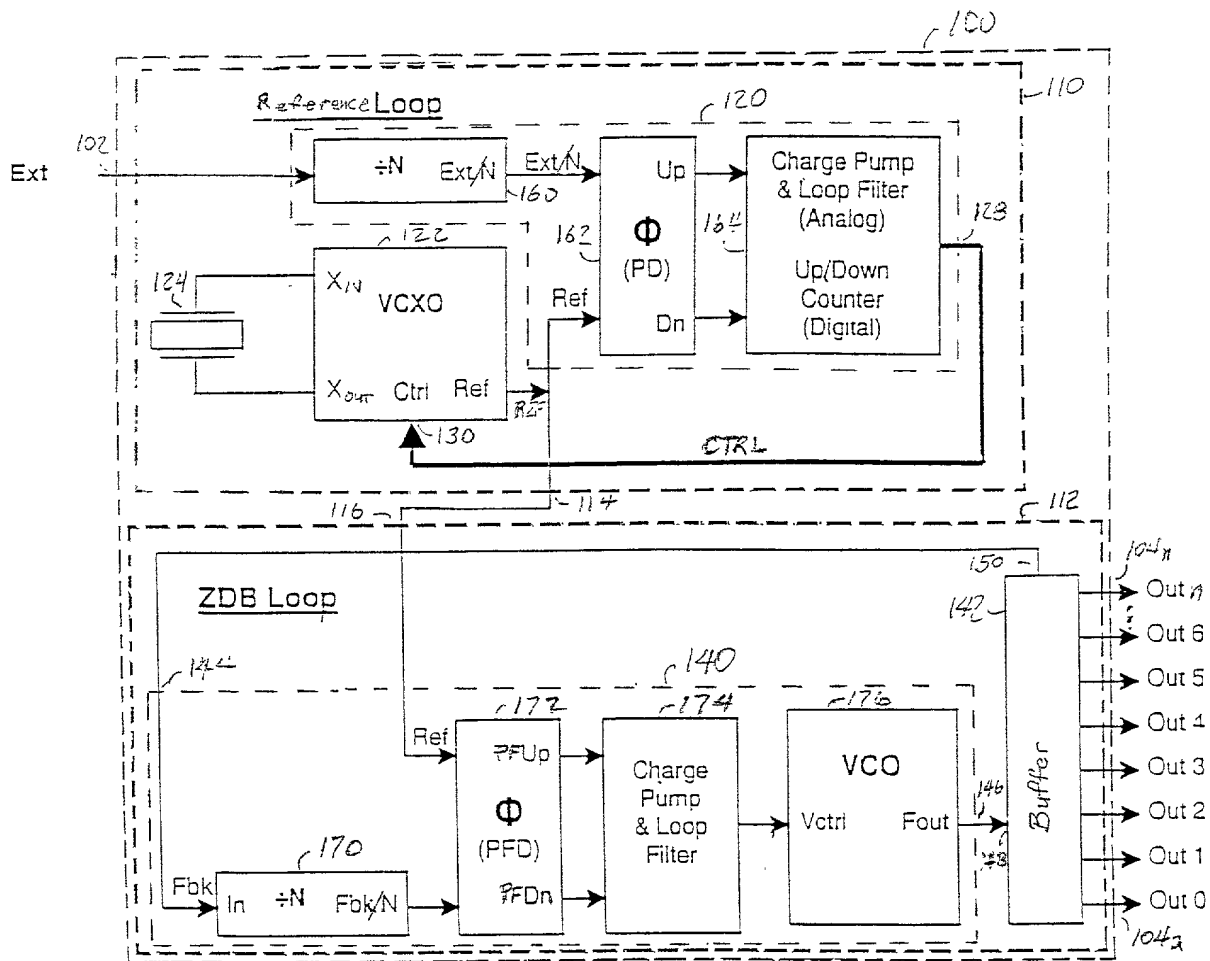


FIG. 3

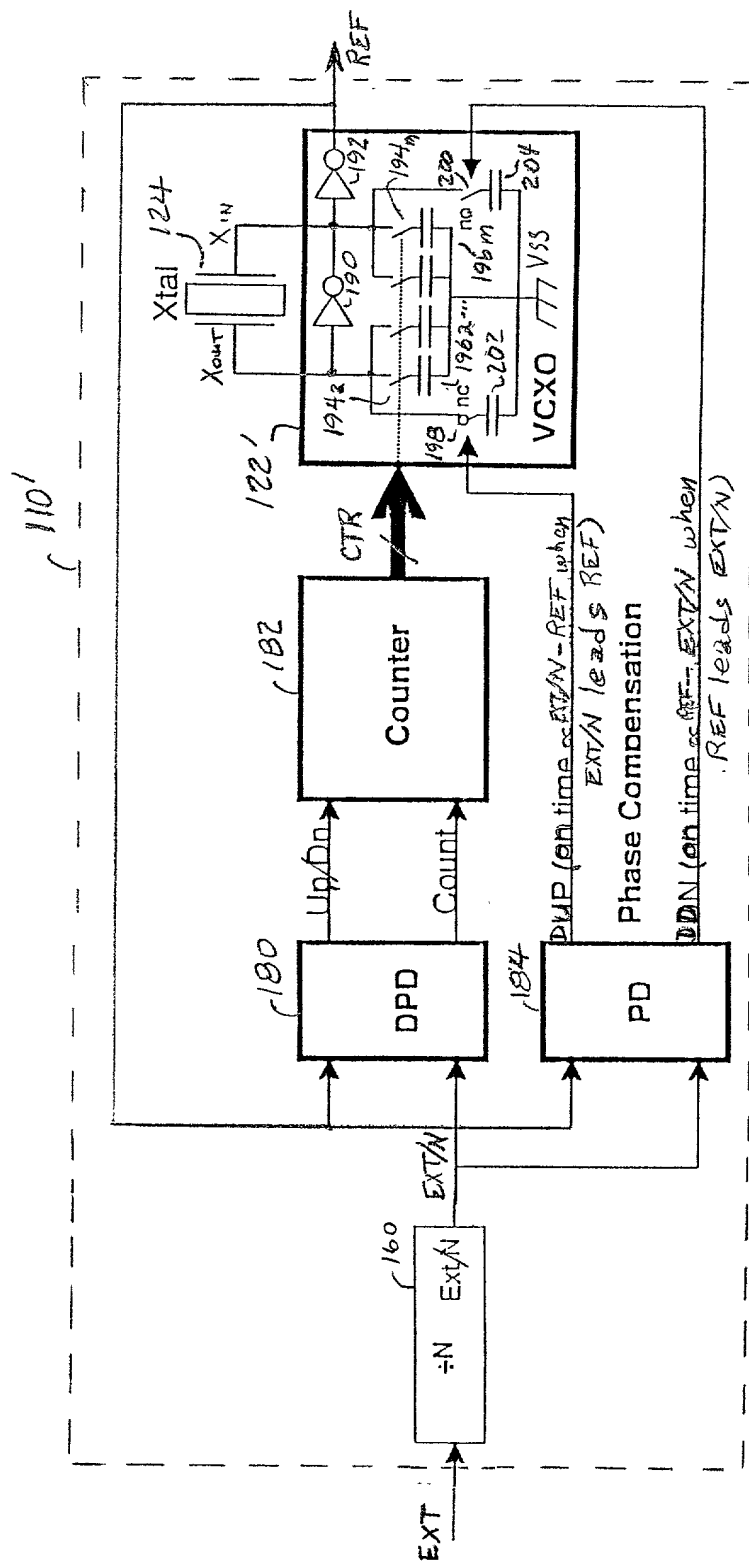


FIG. 4